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TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

*Protecting Texas by Reducing and Preventing Pollution***December 2, 2016**

Mr. Tom Prugel, President
Lake Deerwood Owners Association, Inc.
PO Box 698
Harleton, TX 75651

**Subject: Lake Deerwood Dam - Inventory No. TX03582
Harrison County
Dam Safety Inspection Report**

CONFIDENTIAL

Dear Mr. Prugel:

The Texas Commission on Environmental Quality (TCEQ) Dam Safety Section inspected Lake Deerwood Dam on April 6, 2016, in response to reports that the dam received severe damage during the flooding of March 8-10, 2016. The dam was found to be in poor condition and in threat of breach. The downstream portion of the service spillway pipe apparently broke off within the embankment and the uncontrolled flow of water eroded a large portion of the downstream embankment. The erosion hole was approximately 50 feet across and a vertical scarp extended into the downstream side of the crest almost to the centerline of the dam. Essentially, the downstream half of the dam was missing for a 50 foot section of the dam.

A likely cause of the spillway failure is that the pipe joints simply separated or pulled apart because adequate measures to keep the pipe in place were not present. The pipe likely could not handle the volume of flow without moving.

During the inspection, you indicated that the membership of the owner's association would be moving forward with repairs to the dam without engaging the services of a licensed Texas professional engineer (P.E.). On April 22, 2016, TCEQ received construction photos from you that depicted the dam being rebuilt. What is of utmost concern to TCEQ is that the photos you presented depict the dam being reconstructed as it was prior to the near-failure event. It does not appear that any protocols were implemented to keep the pipe joints from separating again. The concern is that a similar failure of the spillway pipe could occur again.



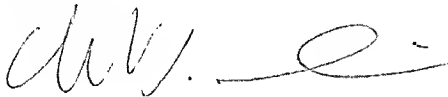
Recommendations were generated by our inspection of the dam. A copy of the inspection report is included for your records. Please review the enclosed report and respond to our office with a written plan of action that includes target dates for addressing each recommendation in the enclosed report. It is understood that certain corrective actions require a professional engineer (P.E.), and your written response for these specific recommendations may be limited to notifying TCEQ of your time frame for retaining a P.E. to address the related area of concern. The **Plan of Action** should be provided to the TCEQ Dam Safety Section by **February 1, 2016**.

Per 30 Texas Administrative Code (30 TAC) § 299.61, an emergency action plan (EAP) is required for this dam. The purpose of the EAP is to have a plan in place to warn affected downstream residents and traffic in the event of an unplanned release of water from the reservoir. TCEQ records indicate that an EAP was approved for this dam on October 12, 2010. Since then however, no updates have been received. It is important that the EAP be updated with accurate inundation mapping and the Harrison County Emergency Management Coordinator approve the document to ensure that all potential downstream hazards are accounted for. It should be noted that inundation mapping of the downstream area was provided the Lake Deerwood Owners Association by TCEQ on February 18, 2014. An additional copy of the inundation mapping is included herein. It is recommended that this inundation mapping be incorporated into the revised EAP. The **EAP** should be provided to the TCEQ Dam Safety Section by **March 1, 2017**.

The TCEQ appreciates your effort in maintaining your dam in a safe manner. Although the Lake Deerwood Owners Association may perceive hiring a P.E. as a waste of money, it is important to note that performing work to the dam without the oversight and direction of a P.E. is a violation of TCEQ Dam Safety Rules (30 TAC § 299.4). Failure to comply with TCEQ rules could constitute the unlicensed practice of engineering, which could also lead to administrative action by the Texas Board of Professional Engineering.

Furthermore, the owners association has a liability to protect downstream residents. Failure to repair and maintain the dam in accordance with TCEQ rules and standards increases that liability. If you have any questions or concerns, please feel free to contact me at (512)239-1379, or by email at charles.schneider@tceq.texas.gov.

Sincerely,



Charles W. Schneider, P.E.
Dam Safety Engineer
Critical Infrastructure Division, MC -177

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Enclosures: Dam Safety Inspection Report
TRC Simplified Breach Analysis, June 2011